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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,686	11/09/2001	Haruyasu Sakata	Q67160	5876

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EXAMINER
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AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/986,686

### Applicant(s)

SAKATA ET AL.

### Examiner

Peter Vincent Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 4 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/24/02 & 9/24/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. Replacement drawings were received on September 24, 2004. These drawings are acceptable. Furthermore, the examiner acknowledges receipt of the formal drawings filed on January 24, 2002.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5, 6 & 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Tani (US 5,233,596).

In regard to claim 1, Tani discloses an optical recording apparatus (figure 1) for performing recording by irradiating a light beam emitted from a light source (1) to a recording medium (4), comprising: a light source driving portion (5) for driving said light source; an emitted light power detecting portion (9) for detecting an emitted light power from said light source; a temperature detecting portion (6) for detecting a temperature of said light source; a light power control portion (5) for adjusting a driving current of said light source such that a change rate (column 3, lines 45-49) of an emitted light power detection value from said emitted light power detecting portion fall within a predetermined range; and a detection value storing portion (7b) for storing a driving current adjustment value from said light power control portion and a temperature detection value from said temperature detecting portion in an associated

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manner, wherein said light power control portion adjusts the driving current value of said light source based on an stored detection value in said detection value storing portion when the temperature detection value is within a range of temperature detection values already stored in said detection value storing portion (column 3, lines 40-49).

In regard to claim 5, Tani discloses an optical recording apparatus (figure 1) for performing recording by irradiating a light beam emitted from a light source (1) to a recording medium (4), comprising: a light source driving portion (5) for driving said light source; an emitted light power detecting portion (9) for detecting an emitted light power from said light source; a temperature detecting portion (6) for detecting a temperature of said light source; a light power control portion (5) for adjusting a driving current of said light source driving portion to maintain the emitted light power from said light source substantially at a predetermined value (column 3, lines 11-21), and a detection value storing portion (7b) for storing a driving current adjustment value from said light power control portion and a temperature detection value from said temperature detecting portion in an associated manner, wherein said light power control portion adjusts the driving current value of said light source based on an stored detection value in said detection value storing portion when the temperature detection value is within a range of temperature detection values already stored in said detection value storing portion (column 3, lines 40-49).

In regard to claim 6, Tani discloses a recording method of an optical recording apparatus (figure 1) for performing recording by irradiating a light beam emitted from a light source (1) to a recording medium (4), comprising: light source driving step of driving said light source (5); emitted light power detecting step of detecting an emitted light power from said light source (9);

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temperature detecting step of detecting a temperature of said light source (6); light power control step of adjusting a driving current of said light source (5) such that a change rate (column 3, lines 45-49) of an emitted light power detection value in said emitted light power detecting step fall within a predetermined range; and detection value storing step of storing a driving current adjustment value in said light power control step in association with a temperature detection value obtained in said temperature detecting step (7b), wherein said light power control step adjusts the driving current of said light source based on an stored detection value in said detection value storing step when the temperature detection value is within a range of temperature detection values already stored in said detection value storing step (column 3, lines 40-49).

In regard to claim 10, Tani discloses a recording method of an optical recording apparatus (figure 1) for performing recording by irradiating a light beam emitted from a light source (1) to a recording medium (4), comprising: light source driving step of driving said light source (5); emitted light power detecting step of detecting an emitted light power from said light source (9); temperature detecting step of detecting a temperature of said light source (6); light power control step of adjusting a driving current of said light source (5) to maintain the emitted light power from said light source substantially at a predetermined value (column 3, lines 11-21), and detection value storing step of storing a driving current adjustment value in said light power control step in association with a temperature detection value obtained in said temperature detecting step (7b), wherein said light power control step adjusts the driving current of said light source based on an stored detection value when the temperature detection value is within a range

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of temperature detection values already stored in said detection value storing step (column 3, lines 40-49).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 & 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tani in view of Imai (US 5,742,566).

For a description of Tani, see the rejection above. However, Tani does not disclose a correction coefficient storing portion (or step) for storing a correction coefficient for the driving current value corresponding to the temperature of said light source in advance, wherein said light power control portion (or step) adjusts the driving current value of said light source by using the correction coefficient already stored in said correction coefficient storing portion (or step) when the driving current adjustment value corresponding to a current temperature detection value is not stored in said detection value storing portion (or step).

Imai discloses a correction coefficient storing portion (or step) (figure 3, element 14B) for storing a correction coefficient for the driving current value corresponding to the temperature of said light source in advance (see also column 4, line 66 thru column 5, line 20; and column 6, lines 59-62), and using this correction coefficient, the driving current is adjusted when the driving current adjustment value is not stored, i.e., when it is detected that temperature correction is necessary (see figure 5, steps SP3 & SP4). It would have been obvious to one of ordinary skill

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in the art at the time of invention by the applicant to have added the correction coefficient storing portion (or step) of Imai to the apparatus (or method) of Tani. The motivation for doing so would have been to provide a means for correcting laser power despite temperature changes, thereby increasing recording accuracy.

6. Claims 3 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tani in view of Tanahashi (JP 4320384).

For a description of Tani, see the rejection above. However, Tani does not disclose that the light power control portion (or step) computes an interpolation value of the stored detection value to adjust the driving current of said light source based on the interpolation value.

Tanahashi (see abstract) discloses an interpolation controller (8) that provides a driving current corresponding to optical intensity data (stored detection value), the interpolation controller being provided in order to decide an arbitrary optical output intensity. It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have configured the light power control portion (or step) of Tani to compute an interpolation value of the stored detection value to adjust the driving current of said light source based on the interpolation value, as suggested by Tanahashi. The motivation for doing so would have been to provide an arbitrary optical output intensity for any stored detection value, thereby simplifying the design.

***Allowable Subject Matter***

7. Claims 4 & 9 are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. See the previous Office Action.

*Response to Arguments*

8. Applicant's arguments filed September 24, 2004 have been fully considered but they are not persuasive.

9. In regard to page 11, paragraph 3 of the amendment, the applicant argues that Tani fails to disclose a detection value storing portion which stores "a driving current adjustment value from said light power control portion and a temperature detection value from said temperature detecting portion in an associated manner" as recited in claims 1 and 5, or a detection value storing step of "storing a driving current adjustment value in said light power control step in association with a temperature detection value obtained in said temperature detecting step" as recited in claims 6 & 10. The examiner disagrees. The data storage unit 7b of Tani corresponds to the claimed "detection value storing portion". Column 3, lines 42-44 states that the data storage unit 7b "stores in advance the data on the relationship between **the drive current and semiconductor laser temperature**". This "drive current" is a value (24) which is measured from a light power control portion (5), i.e., the claimed "a driving current adjustment value from said light power control portion". Similarly, this "semiconductor laser temperature" is measured from a temperature detecting portion, see column 3, lines 45-47: "[t]he control unit 7a detects the temperature or temperature variance of the semiconductor laser", i.e., the claimed "a temperature detection value from said temperature detecting portion". Finally, column 3, lines 45-49 state that the temperature is detected "**on the basis** of the variance of the drive current monitor signal", i.e., the claimed "in an associated manner".



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10. In regard to page 12, paragraph 2, the applicant argues that the Tani data storage unit (7b) does not disclose storing driving current and temperature value data from light power control and temperature detecting portions. The examiner disagrees for the reasons noted on item 9 above.

11. In regard to page 12, last two lines of paragraph 2 and first two lines of paragraph 3, the applicant notes that the Tani storage unit relies on data stored in advance rather than data stored during the operation of the laser; and Tani uses data that was stored in advance rather than actual recording stage data. First, it should be noted that storing data during the operation of the laser is not claimed. Second, using actual recording stage data is also not claimed. Finally, the last two lines of claim 1 recite “a range of temperature detection values **already stored** in said detection value storing portion”, which corresponds to the “data stored in advance” which the applicant repeatedly points out as being taught by Tani. Note that on page 13, line 6, the applicant mentions “[i]n contrast, Tani must rely on data stored in advance. However, as noted by the examiner, the last two lines of claim 1 does not show any contrast with the teachings of Tani.

12. The 102(e) rejections of claims 1, 5, 6 & 10 under Miyabata et al. (US 6,671,248) have been withdrawn in light of the applicant’s submission of a certified English translation.

13. In regard to page 12, paragraphs 1-3, the applicant traverses the 103(a) rejections of claims 2, 3, 7 & 8 because Tani allegedly fails to disclose or suggest all of the recitations of the current invention, and neither Imai nor Tanahashi suggest or disclose anything to correct the deficiencies of Tani. However, in light of the examiner’s arguments on items 9-11 above, the rejections are maintained.

*Conclusion*

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

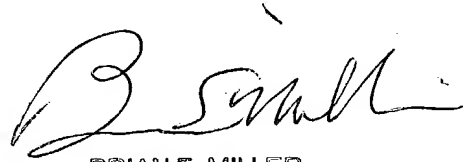
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Vincent Agustin  
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BRIAN E. MILLER  
PRIMARY EXAMINER